

## Economic Impact of Marine Angling Eyed

The effects of marine recreational fishing upon this country's economy will be studied under a National Oceanic and Atmospheric Administration (NOAA) contract issued last summer.

The contractor, Centaur Management Consultants, Inc., of Washington, D.C., will gather information on the value of goods and services generated by the sport.

As saltwater anglers use fishing equipment, boat rentals, motors, camping equipment, food, and lodging, the survey will identify and evaluate the commerce created by the sale of these items.

The \$70,329 contract, awarded by NOAA's National Marine Fisheries Service, will divide the economic impact into four regional areas: Northeast, southeast, northwest, and southwest.

Sources of information will include sampling surveys of supplies of goods and services from origin to point of sale. Other data may be supplied by state and public agencies, by private organizations, and by trade associations.

Among Federal agencies, the NMFS is responsible for the development of conservation and management policies

for marine fisheries resources for both commercial and recreational purposes. Over the years, a considerable body of knowledge has accumulated on the economics of commercial fisheries, but relatively little on recreational fishing.

The end product of the study will be a comprehensive document of the socio-economic scope and value of marine recreational fishing in the United States. The study, to be completed in the spring of 1977, will assist the NMFS, state agencies, and regional management councils in evaluating the relative merits of recreational and commercial fishing in the management of marine resources and in administering the Fishery Conservation and Management Act of 1976.

### Foreign Fishery Developments

## Egyptian Fishery Developments Noted

Admiral Emad El Din Madkour, Managing Director of the Egyptian High-Seas Fishing Company (a government-owned corporation), traveled to Aden in early April 1976 to conclude an agreement for a proposed joint Egypt/People's Democratic Republic of Yemen Fisheries Company. However, the Admiral has indicated that all financial problems associated with the formation of this new joint venture have not been solved. The proposal requires an initial investment of US\$5 million which will be paid by the two partners on signing the agreement; the remaining \$20 million is to be paid in equal amounts by both partners at the rate of US\$5 million annually within the next 4 years. The company will own and operate one large refrigerated fish carrier and a fleet of eight fishing vessels. The company plans to fish in the southern Red Sea, the Persian Gulf, and the Indian Ocean. Admiral Madkour said that, based on his company's past experience, the initial US\$5 million will not be sufficient. The Egyptian High-Seas Fishing Company was to have had a capitalization of US\$14 million in 1964 to acquire 21 fishing and fish-transporting vessels. The Egyptian Government reduced the capitalization to \$3 million. Even with sizeable loans, the Company was able to acquire only five used vessels, two with a capacity of 1,700 GRT and three

having 650 GRT. Admiral Madkour is now seeking US\$4.5 million (including a request to the US Agency for International Development) to refit and modernize these vessels.

The Egyptian High-Seas Fishing Company does not have any vessels fishing in the proposed fishing area of the southern Red Sea and northern Indian Ocean where the Admiral has indicated that lobster and shrimp are plentiful. Despite occasional calls by Egyptian Government planners for greatly increasing the supply of fish to help meet Egyptian protein needs, Admiral Madkour seems to get very little help in his efforts. The present annual catch of the Company's fleet is only 15,000 metric tons. By modernizing and expanding the fleet to the 21 vessels originally planned, Admiral Madkour says he could increase the company's catch to 100,000 metric tons per year. (Source: U.S. Consulate General, Alexandria.)

### JOINT VENTURE WITH GDR

Late in 1975, Egypt announced the formation of a joint fishing company to exploit the fishing resources of Lake Nasser. With the technical assistance of experts from the German Democratic Republic (GDR — East Germany), the company intends to operate a fleet of 16 fishing vessels in the Aswan Dam's Lake Nasser, and construct three cold-

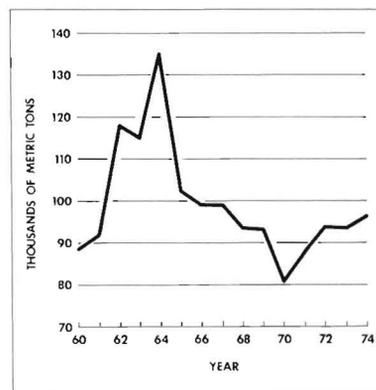


Figure 1.—Egyptian fisheries catch, 1960-74.

storage plants capable of holding 1,000 metric tons of catch each. The company will also acquire a fleet of refrigerated trucks to transport the catch to population centers. (Source: U.S. Embassy, Cairo.)

### JOINT VENTURE WITH NORWAY

Negotiations are about to be concluded with the Norwegian firm Hareide International Group to develop fishing resources in Lake Nasser. Production is expected to double within 1 year. Hareide International will also submit a 5-year development plan to the Egyptian Government to expand Egyptian fishing in the Mediterranean and the Red Sea. (Source: *La Pêche Maritime*.)

### DEVELOPMENTS IN LAKE MARYUT

Pro-fisheries forces seem to have won a low-key struggle over the future of Lake Maryut, a sizeable expanse of

shallow fresh water south of Alexandria. According to *Progres Egyptien*, the Governor of Alexandria, Abdel Tawab Hodeib, has ordered a halt to any further draining or landfilling of Lake Maryut. A strong lobby of agriculturists and real estate promoters had been urging more extensive drainage of Maryut to provide both badly needed farmland and additional building sites. The entire Smouha quarter of the city was formerly part of Lake Maryut, including the extensive Nouzha area where Alexandria's municipal airport was built. As the airport is under military control, fishers have not been allowed to fish the Nouzha grounds of the lake.

Governor Hodeib's special Committee of Inquiry for Food Resources has recommended that steps be taken to stop industrial pollution of Lake Maryut (the western reaches of the lake lie in an industrial area). The Committee also recommended that the present water levels be maintained and the lake restocked. The Committee further recommended that "competent authorities" (i.e., the Ministry of Defense) be asked to reopen the Nouzha grounds so the resources that have not been fished in recent years can be utilized. (Source: U.S. Consulate General, Alexandria.)

## FISHERIES CATCH

The total Egyptian fisheries catch in 1974 was 96,200 metric tons, an increase of three percent over the 93,500 metric tons caught in 1973 (Fig. 1). A record 135,000 metric tons was caught in 1964. Since 1966, catches have been below 100,000 metric tons, reaching a low of 80,900 metric tons in 1970. While more recent catches have recovered somewhat from the 1970 low, the 1974 catch is still 29 percent below the record catch of 1964.

## Japanese Fish Farm Will Use Nuclear Power Plant Hot Water Discharges

The Prefectural Government of Fukui, Japan, has announced plans to begin construction of a \$600,000 fish farm this year. The farm will be built in Urazoko Bay, and will use the hot water discharges from a nuclear power plant. The farm will consist of two

areas of the bay enclosed by netting located about 500 meters from the power plant.

The farm plans to raise young "ayu" (sweetfish), red sea bream, and yellowtail. As yellowtail cannot winter in the 3-4°C waters along the Japan Sea coast, this project aims at keeping the water temperature in the fish enclosures at 10°C by using the nuclear power plant's hot water wastes. Initial experimentation began this autumn when the enclosures were stocked with 20,000 young yellowtail and 15,000 red sea bream.

In addition, the prefectural Government will stock a freshwater research pond with 160,000 young "ayu," a popular domestic freshwater fish. This will be the first attempt at "ayu" farming in Japan.

According to the NMFS Office of International Fisheries, in a similar project last winter, a Fukui fishery cooperative succeeded in wintering juvenile yellowtail in a small enclosed area supplied with hot water discharges from a nuclear power plant. If the larger scale project is successful, similar farms may eventually develop around the nine nuclear power plants to be built in the Wakasa Bay area, Fukui, Japan. (Source: *The Japan Times*.)

## Russia Orders Polish Fish Factory Vessels

The Soviet Union has placed a new and valuable order in Poland for the construction of 11 fish factory base-ships of the B-670 class, according to the NMFS Office of International Fisheries. The contract, worth more than US\$250 million, is the most valuable single order in the history of the Polish shipbuilding industry.

The B-670 contract was first discussed publicly during Inrybprom-75, the international fisheries exhibition which was held in August 1975 in Leningrad. However, it was not until 9 December 1975 that a contract was signed in Moscow for the purchase of six B-670-class vessels. Later, on 13 January 1976, it was announced that the Soviets had ordered a total of 11 fish factory baseships of the B-670 class. Delivery of the vessels will take place from 1978 through 1980.

Little is known thus far about the basic specifications for the new B-670 class, which was designed to supersede the older B-69 series. According to Polish sources, the vessels will be much more sophisticated than the B-69 class. They will be 178.3 meters long and 11,500 tons deadweight, and be able to attain a speed of 15 knots. The processing facilities aboard will consist of eight different production lines. The vessel's primary processing function will be to produce 220,000 cans of sardines, saury, mackerel, and other pelagic fish in 24 hours. The freezing line will be capable of processing 100 tons of fresh fish in 24 hours, the salting line 150 tons in barrels and 20 tons in cans during the same period. Production potential also includes 50 tons of salted fish in 50-liter barrels, 3 tons of roe, 4.5 tons of cod liver oil, and 100 tons of fish meal each day. By comparison, the B-69-class factory base-ships only have the capacity to process 90 tons of fish each day, fillet 80 tons of cod, and produce 165 tons of salted herring in barrels per day.

The fish factory baseship *Professor Baranov*, the first vessel of the B-69 class, was delivered to the Soviet Union in 1967 by the Polish shipyard Stocznia Gdanska. The Soviet Ministry of Fisheries ordered a total of 35 of these vessels from Poland; the last was delivered to the Soviet fishing fleet at the end of 1975.

The B-69-class of fish factory base-ships (also known as the *Professor Baranov* class after the prototype vessel) was designed for use by the Soviet high-seas fishing fleet in the Atlantic. Vessels of this class are equipped with elaborate crew quarters and processing equipment capable of producing finished as well as semi-finished products. The basic specifications of this class are as follows:

Length (m)	164.0
Width (m)	21.3
Draft (m)	8.08
Deadweight Tons	10,000
Gross Register Tons	13,571
Horsepower	7,200
Speed (knots, max.)	15.7
Crew	254
Endurance (days)	75

According to the NMFS Office of International Fisheries, most coastal nations, either unilaterally or through the U.N. Law of the Sea Conference, are expected to extend their fishing

limits to 200-mile exclusive economic zones in the near future. It therefore seems likely that countries (such as the Soviet Union) which harvest the majority of their fisheries catch off foreign shores will be forced to cut back fishing operations in those areas. However, the Polish shipbuilding industry, which

has sold fishing vessels to the Soviet Ministry of fisheries since the 1950's, requires a constant flow of new orders to remain profitable. Polish sources have indicated that this new \$250 million order, coupled with orders for new "supertrawlers" and tuna purse seiners, will provide future investment

funds for the Polish shipbuilding industry. According to Jerzy Hinc, Export Director of the Centromor Polish Vessel Import/Export Company, the orders will not only earn foreign currency, but also "create prospects for our (Polish) shipbuilding industry till the end of the century."

Publications

## Foreign Fisheries Articles Translated

Listed below are abstracts of articles on foreign fisheries recently translated by the Language Services Division, Office of International Fisheries, National Marine Fisheries Service, NOAA. Copies of the full translations are available from the Language Services Division, F43, National Marine Fisheries Service, NOAA, Washington, DC 20235.

**"Whither 'Ethnic Purity'?"** Under this title, an article in *Suisan Shimbun*, No. 3705, 17 March 1976, reports that an unidentified Japanese trading company is arranging for the chartering of Korean shrimp trawlers in Surinam. The Surinam-Japanese company SUJAFI is currently operating 50 shrimping vessels. Five of these vessels are Korean trawlers chartered by SUJAFI through the unnamed Japanese trading firm. SUJAFI reportedly wishes to charter 15 more Korean vessels. More than 80 Korean fishing vessels are in operation on the shrimping grounds off Surinam. The same trading firm arranged for 39 of these 80 vessels to fish there. The writer of the article finds these activities of the trading firm difficult to reconcile with the diminishing role confronting Japanese fishing companies in Surinam. (Translator's comments: The Japanese fishing industry is very sensitive about the Korean inroads into distant water

fisheries. The frank tone of the article is interesting, because *Suisan Shuho* is an official publication of the Japan Fisheries Association. The Association president will be the chief negotiator in the forthcoming U.S.-Japan fisheries bilateral talks.)

**"Japanese Albacore Prices Soar."** According to an article in *Asahi Shimbun*, No. 32501, 19 June 1976, wholesale albacore prices at the tuna-landing port of Yaizu are soaring this season. The average price as of the end of May was 380 yen/kg (US\$1.27/kg), which was about twice as much as the average price for the same period last year. This sudden price increase has been attributed to frantic albacore buying at Yaizu by several American canners. The article states that the race to obtain albacore for canning has been spurred by the ban on tuna fishing in the 200-mile economic zone just imposed by Mexico.

**"A 4.5 Million Metric Ton Decrease in Fish Catches."** According to an article in *Suisan Shimbun*, No. 3710, 31 March 1976, the annual Japanese catches would decrease by about 4.5 million metric tons if all coastal nations of the world established 200-mile economic zones. Out of this total, the eleven largest fishing companies of Japan would suffer about a 2.4 million

metric ton decrease, while the small to medium-sized fishing companies would suffer a 2.1 million metric ton decrease. The latter figure is broken down in the following table:

Offshore trawling (single vessel)	463,900
Offshore trawling (pair)	2,400
Northern Seas (East and West)	927,700
Shrimp trawling (South America)	194,400
Large and medium-size purse seining (single)	145,600
(pair)	—
Salmon drift netting	11,700
Salmon longlining	1,400
Salmon mothership fleet	19,100
Crab (northern, tanner)	3,500
Gill netting	22,600
Crab mothership	16,400
Northern Seas longlining and gill netting	29,800
Tuna (incl. skipjack)	266,700
<b>Total</b>	<b>2,108,800</b>

## Fishery Hygiene Booklet Noted

"Fish and Shellfish Hygiene," published by the Food and Agriculture Organization (FAO) of the United Nations, is the report of a World Health Organization (WHO) Expert Committee on Fish and Shellfish Hygiene convened cooperatively with FAO in September 1973.

The 62-page booklet briefly reviews principal human diseases associated with fish and shellfish and current public health problems related to their production, processing, and distribution. Diseases caused by living organisms are better covered than those caused by biotoxins or chemical pollutants. Some environmental factors are briefly discussed, as are scientific and administrative aspects of hygiene problems. Appendices include characteristics of principal parasitic fish- and shellfish-born diseases in man and a selected bibliography. The volume is available from Unipub, Box 433, Murray Hill Station, New York, NY 10016 at \$2.50 per copy.

Recent reductions in the number of Surinam-based Japanese fishing vessels.					
Companies	From	To	Companies	From	To
Nisshin Co.	28	23	Zen Sake Ren	6	6
Shinyo	18	13	Guyana Suisan	5	(To Nisshin) (Moved to other bases)
Hokoky Kagawa	8	3	Nippon Enyo	8	
	8	3	Nippon Kyodo	8	(To Brazil Taiyo)
Nambe Ebi Seiwa	( 8)	(Bankrupted)	Hakodate	8	8
	5	(all Korean crew)	Yutaka	13	13
			<b>Total</b>	<b>123</b>	<b>69</b>